



NATIONAL PARK SERVICE

Environmental Audit Program

EnviroCheck Sheet

Used Oil Management
June 2002 Update

USED OIL MANAGEMENT

Parks generate used oil through maintenance of vehicles and equipment. Common sources are car repair shops, service stations, motor pools, metal working operations and boat marinas. Once oil has been used, it can be collected, recycled, and used again. An estimated 380 million gallons of used oil are recycled each year. Recycled used oil can either be used again for the same job or for a completely different task. For example, used motor oil can be re-refined and sold as furnace fuel oil. Aluminum rolling oils also can be filtered on site and used over again. Recycling oil is good for the environment and good for business. For example:

- Re-refining used oil consumes about one-third of the energy it takes to refine virgin crude oil to lubricant quality.
- It takes 42 gallons of virgin crude oil, but only one gallon of used oil, to produce 2 ½ quarts of new, high-quality lubricating oil.
- One gallon of used oil processed for fuel contains about 140,000 British Thermal Units (BTUs) of energy.

Auditor's Guidelines:

Records to Review

- Used oil disposal record

Features To Observe

- Auto Shops
- Used oil accumulation tanks
- Maintenance sheds

Persons to Contact

- Auto shop staff
- Maintenance supervisor

REGULATED SUBSTANCES

Used Oil

Used oil consists of any petroleum-derived oil that has not been contaminated with gasoline, solvent, metals, or any other potential hazardous waste. If used oil is contaminated with any potential hazardous waste, it must be tested to determine whether it is a hazardous waste. If the tests show the used oil is a hazardous waste, it must be managed according to hazardous waste regulations.

To be defined as used oil under 40 CFR 279, a material must meet all three of the following criteria:

1. **Origin.** The oil must be derived from crude or synthetic oil. Examples of crude oil-derived oils and synthetic oils are motor oil, mineral oil, laminating surface agents, and metalworking oils (i.e., not animal and vegetable oils).
2. **Use.** The oil must have been used as a lubricant, coolant, heat (non-contact) transfer fluid, hydraulic fluid, or for a similar use.
 - *Lubricants:* Lubricants include, but are not limited to, motor oil, metalworking lubricants, and emulsions.
 - *Hydraulic fluids:* Hydraulic fluids include brake fluid, transmission fluid, or heavy equipment lift hydraulic fluids.
 - *Heat transfer fluids:* Heat transfer fluids include coolants, heating media, refrigeration oils, and electrical insulation oils.
 - *Similar Use:* Authorized states or regions determine what is considered a "similar use" on a site-specific basis according to whether the material is used and managed in a manner consistent with Part 279.

3. Contamination method. The oil must be contaminated by physical (e.g., high water content) or chemical (e.g., lead, halogens, or other hazardous constituents) impurities as a result of use.

Petroleum-based solvents are not considered used oil because solvent use does not meet the “use-based criterion.” Solvents are used to dissolve or mobilize other constituents, and are not used as a lubricant, heat transfer fluid, hydraulic fluid, or for a similar use.

Used Oil Filters

Terne-plated filters are composed of an alloy of tin and lead. Heavy-duty vehicle operations such as buses, semi-tractors, mining and construction equipment sometimes use terne-plated filters. Due to the metal content, terne-plated filters must be managed in accordance with hazardous waste regulations. However, if recycled, terne-plated filters are exempt from hazardous waste regulations under the scrap metal exemption of 40 CFR 261.6(a)(3)(iv).

Non-terne plated oil filters are used for light duty vehicle operations such as automobiles and light duty trucks. Non-terne plated oil filters, when hot drained (at greater than 60°F for at least 24 hours) so that there is no free flowing oil, can be recycled or disposed of in the trash. They are not considered a hazardous waste.

Contaminated/Off-specification Fuel

Contaminated/off-specification fuel includes gasoline, diesel, kerosene, or other liquid fuels that have become contaminated with water, dirt, or other nonhazardous substances. If the contaminated/off-specification fuel is sent to a fuel burner to be used for energy, the material is not regulated as a hazardous waste. The facility need only document that the contaminated/off-specification fuel is not contaminated with a hazardous substance, and maintain records that it was burned for energy. Note that if the fuel is contaminated with solvents, metals, or other potentially hazardous wastes, the fuel must be tested to determine whether it is a hazardous waste before any management can occur.

COMPLIANCE REQUIREMENTS

Recycling

Used Oil

40 CFR Part 279 regulates used oil management for recyclers. The regulations include burning restrictions for used oil and management standards for facilities that handle used oil.

The Recycling Presumption: This presumption contained in 40 CFR 279 exempts used oil from consideration as a hazardous waste if it is managed through a used oil recycler and is not mixed with any other hazardous waste.

Used Oil and Hazardous Waste Mixtures: Used oil mixed with a hazardous waste (e.g., solvents) typically must be managed as a hazardous waste.

Used Oil Filters

If a used terne-plated filter is generated, it must be managed in accordance with hazardous waste regulations as a result of its tin and lead content. As mentioned above, if terne-plated filters are recycled, they are exempt from hazardous waste regulations. If they are not recycled, they must be managed as hazardous waste.

Non-terne plated filters are exempt from hazardous waste regulations if these oil filters have been gravity hot-drained using one of the following methods:

- Puncturing the filter anti-drain back valve or the filter dome end and hot-draining (at greater than 60°F for at least 24 hours);
- Hot-draining and crushing;
- Dismantling and hot-draining; or
- Any other equivalent hot-draining method which removes the used oil

After being drained, non-terne plated filters may be recycled. Recycling is always the NPS preferred method of disposal.

Management

Used Oil

Used oil must be managed in a way that minimizes impacts on the environment. Used oil storage containers must be:

- In good condition (i.e., no severe rusting, apparent structural defects or deterioration) (40 CFR 279.22(b)(1)); and
- Not leaking (no visible leaks) (40 CFR 279.22(b)(2)).

Used Oil-Filters

Terne-plated filters must be drained of oil and stored in a hazardous waste disposal site; they are subject to hazardous waste storage and handling regulations (NOTE: hazardous waste can be recycled, see the Hazardous Waste Check Sheet for more information about what constitutes proper hazardous waste handling).

Non terne-plated filters must be drained of all oil so leakage does not occur when being stored for disposal. They are not subject to hazardous waste storage and handling regulations.

Contaminated/Off-Specification Fuel

Contaminated/off-specification fuel must be managed as with any other fuel oils. Containers should be in good condition, labeled according to Hazard Communication requirements (see Hazard Communication EnviroCheck Sheet), and stored with secondary containment as applicable under the Clean Water Act (see SPCC Planning EnviroCheck Sheet).

Labeling

Used Oil

All containers storing used oil, and all piping connected to used oil containers, must be labeled as “used oil” to distinguish it from “waste oil.” “Waste oil” is considered hazardous waste and must comply with hazardous waste requirements. Some states have alternative labeling requirements that require other wording on labels.

Used Oil Filters

Unless being recycled, terne-plated filters must be labeled according to hazardous waste regulations.

Non-terne plated filters are exempt from hazardous waste regulations if they use a hot-draining method that removes all free flowing used oil in the used oil filter; there are no labeling requirements for used non-terne plated filters.

Contaminated/Off-Specification Fuel

All off specification fuels should be labeled according to the fuel and must follow the Hazard Communication requirements. They should also be labeled to inform NPS staff that only fuels (i.e., no solvents, metals, thinners, or paints) may be stored in off-specification fuel containers.

Miscellaneous Requirements

Notification

There are no reporting requirements for management of used oil, used oil filters, and contaminated/off-specification fuel.

If they are not recycled, hazardous waste terne-plated oil filters are subject to hazardous waste reporting requirements (see the NPS Hazardous Waste Management Check Sheet).

Training

Hazardous waste training requirements are mandatory for facilities generating hazardous waste terne-plated used oil filters (see the NPS Hazardous Waste Management Check Sheet).

POLLUTION PREVENTION

Used Oil and Oil-Filters

- Participate in a closed-loop system, purchasing recycled oil and recycling oil through one distributor.
- Change oil at the maximum allowable time intervals to extend the life of the oil.
- Hot drain oil filters to prevent spills.
- Recycle used oil filters (terne and non-terne) for scrap metal.
- Prevent spills during change out to avoid disposing of oily rags.
- Purchase re-refined motor oil when feasible.

Contaminated/Off-Specification Fuel

- Keep it clean by not mixing it with hazardous waste.

FOR MORE INFORMATION

- **EPA Office of Solid Waste, Used Oil Management Program,**
<<http://www.epa.gov/epaoswer/hazwaste/usedoil>>.
- “Managing Used Oil: Advice for Small Businesses,” Publication: EPA530-F-96-004,
<www.epa.gov/epaoswer/hazwaste/usedoil/usedoil.htm>.
- “RCRA, Superfund & EPCRA Hotline Training Module: Introduction to Used Oil,”
<<http://www.epa.gov/epaoswer/hotline/training/uoil.pdf>>.
- American Petroleum Institute list of links on Used Oil Collection and Recycling
<http://www.recycleoil.org/usedoil_links.htm>.



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CHECKLIST ITEM	PRIORITY	NOTES
1. State regulations that differ from federal regulations have been determined and documented. [BMP]	3	
<i>Used Oil Management</i>		
<i>Storage and Handling</i>		
2. If used oil is mixed with hazardous waste, the entire mixture is managed as hazardous waste. [40 CFR 279.21]	2	
3. The facility has procedures to prevent used oil from being mixed with hazardous waste. [BMP]	3	
4. Facility staff that handle used oil are familiar with used oil requirements. [BMP]	3	
5. Containers and aboveground storage tanks used to store used oil are in good condition (i.e., no severe rusting, apparent structural defects or deterioration) and not leaking. [40 CFR 279.22(b)]	2	
6. Containers storing used oil are labeled with the words "Used Oil." [40 CFR 279.22(a)]	2	
7. Containers storing used oil are leak proof, closed and sitting on a surface that is reasonably impervious to used oil (e.g., on concrete or asphalt). [BMP]	3	
8. Fill pipes used to transfer used oil into underground storage tanks are labeled or marked clearly with the words "Used Oil." [40 CFR 279.22(c)]	2	
<i>Releases</i>		
9. In the event of a release from a used oil tank or container, the facility responds by: <ul style="list-style-type: none"> • Stopping and containing the release; • Properly managing any used oil or contaminated materials; and • Repairing or replacing the leaking container or tank. [40 CFR 279.22(d)]	2	
<i>Transportation</i>		
10. The facility has ensured that its used oil transporter has obtained an EPA ID number. [40 CFR 279.24]	2	
11. The facility maintains records of off-site shipments of all shipments of used oil. The records include the following: <ul style="list-style-type: none"> • Quantity of shipments; • Date of shipments; • Name of transporter and EPA I.D. # and name of recycling facility. [BMP]	3	

This document does not necessarily contain all information needed to determine compliance status.

CHECKLIST ITEM	PRIORITY	NOTES
<i>Used Oil Filter Management</i>		
12. Non-terne plated used oil filters that are not mixed with hazardous waste are gravity hot-drained using one of the following methods: <ul style="list-style-type: none"> • Puncturing the filter anti-drain back valve or the filter dome end and hot draining (>60F for at least 24 hour); • Hot draining and crushing; • Dismantling and hot-draining; or • Any equivalent method that will remove all of the used oil. [40 CFR 261.4(b)(13)] 	2	
13. If not recycled, terne-plated filters are managed as hazardous waste. (See Hazardous Waste Management Check Sheet for specific requirements)	2	
14. All used oil filters are recycled for scrap metal in accordance with applicable regulations. (Terne-plated filters that are recycled are exempt from hazardous waste regulations under the scrap metal exemption of 40 CFR 261.6(a)(3)(iv).) [BMP]	3	
<i>Contaminated/Off-Specification Fuel</i>		
15. Contaminated/off-specification fuel is tested to determine whether it is a hazardous waste. [40 CFR 262.11]	2	
16. Contaminated/off-specification fuel that is not a hazardous waste is burned for energy. [40 CFR 261.32(c)]	2	
<i>Pollution Prevention/Green Procurement</i>		
17. Re-refined motor oil is purchased whenever possible. [BMP]	3	

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